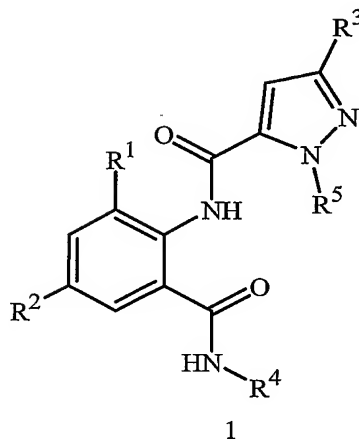


CLAIMS

What is claimed is:

1. A compound of Formula 1, an *N*-oxide or a salt thereof



wherein

R<sup>1</sup> is Me, Cl, Br or I;

R<sup>2</sup> is Cl, Br, I or -CN;

R<sup>3</sup> is Cl, Br, CF<sub>3</sub>, OCH<sub>2</sub>CF<sub>3</sub> or OCF<sub>2</sub>H;

R<sup>4</sup> is H; or C<sub>1</sub>–C<sub>4</sub> alkyl, C<sub>2</sub>–C<sub>4</sub> alkenyl or C<sub>2</sub>–C<sub>4</sub> alkynyl, each optionally substituted with CN or SMe; and

R<sup>5</sup> is phenyl substituted with 1 to 3 substituents selected from the group consisting of F, Cl, Br and Me.

2. The compound of Claim 1 wherein

R<sup>2</sup> is Cl;

R<sup>3</sup> is Cl, Br or CF<sub>3</sub>;

R<sup>4</sup> is Me, Et, *i*-Pr or *t*-Bu; and

R<sup>5</sup> is 2-chlorophenyl, 2-fluorophenyl, 2-bromophenyl, 2,4-dichlorophenyl, 2-chloro-4-fluorophenyl, 2,6-dichlorophenyl, 2,6-difluorophenyl or 2,4,6-trichlorophenyl.

3. The compound of Claim 1 wherein:

R<sup>2</sup> is CN;

R<sup>3</sup> is Cl, Br or CF<sub>3</sub>;

R<sup>4</sup> is Me, Et, *i*-Pr or *t*-Bu; and

R<sup>5</sup> is 2-chlorophenyl, 2-fluorophenyl, 2-bromophenyl, 2,4-dichlorophenyl, 2-chloro-4-fluorophenyl, 2,6-dichlorophenyl, 2,6-difluorophenyl or 2,4,6-trichlorophenyl.

4. A composition for controlling an invertebrate pest comprising a biologically effective amount of a compound of Claim 1 and at least one additional component

selected from the group consisting of a surfactant, a solid diluent and a liquid diluent, said composition optionally further comprising an effective amount of at least one additional biologically active compound or agent.

5. A composition of Claim 4 wherein at least one additional biologically active compound or agent is selected from insecticides of the group consisting of pyrethroids, carbamates, neonicotinoids, neuronal sodium channel blockers, insecticidal macrocyclic lactones,  $\gamma$ -aminobutyric acid antagonists, insecticidal ureas, juvenile hormone mimics, members of *Bacillus thuringiensis*, *Bacillus thuringiensis* delta endotoxin, and naturally occurring or genetically modified viral insecticides.

6. The composition of Claim 4 wherein the at least one additional biologically active compound or agent is selected from the group consisting of abamectin, acephate, acetamiprid, acetoprole, amidoflumet, avermectin, azadirachtin, azinphos-methyl, bifenthrin, bifenazate, bistrifluron, buprofezin, carbofuran, chlorfenapyr, chlorfluazuron, chlorpyrifos, chlorpyrifos-methyl, chromafenozide, clothianidin, cyfluthrin, beta-cyfluthrin, cyhalothrin, lambda-cyhalothrin, cypermethrin, cyromazine, deltamethrin, diafenthiuron, diazinon, diflubenzuron, dimethoate, dinotefuran, diofenolan, emamectin, endosulfan, esfenvalerate, ethiprole, fenothicarb, fenoxycarb, fenpropathrin, fenvalerate, fipronil, flonicamid, flucythrinate, tau-fluvalinate, flufenoxuron, gamma-chalothrin, halofenozide, hexaflumuron, imidacloprid, indoxacarb, isofenphos, lufenuron, malathion, metaldehyde, methamidophos, methidathion, methomyl, methoprene, methoxychlor, methoxyfenozide, metofluthrin, monocrotophos, methoxyfenozide, novaluron, noviflumuron, oxamyl, parathion, parathion-methyl, permethrin, phorate, phosalone, phosmet, phosphamidon, pirimicarb, profenofos, profluthrin, protrifenbute, pymetrozine, pyridalyl, pyriproxyfen, rotenone, spinosad, spiromesifen, sulprofos, tebufenozide, teflubenzuron, tefluthrin, terbufos, tetrachlorvinphos, thiacloprid, thiamethoxam, thiodicarb, thiosultap-sodium, tolfenpyrad, tralomethrin, trichlorfon, triflumuron, aldicarb, fenamiphos, amitraz, chinomethionat, chlorobenzilate, cyhexatin, dicofol, dienochlor, etoxazole, fenazaquin, fenbutatin oxide, fenpyroximate, hexythiazox, propargite, pyridaben, tebufenpyrad, *Bacillus thuringiensis aizawai*, *Bacillus thuringiensis kurstaki*, *Bacillus thuringiensis* delta endotoxin, baculovirus, entomopathogenic bacteria, entomopathogenic virus and entomopathogenic fungi.

7. The composition of Claim 4 wherein the at least one additional biologically active compound or agent is selected from the group consisting of cypermethrin, cyhalothrin, cyfluthrin and beta-cyfluthrin, esfenvalerate, fenvalerate, tralomethrin, fenothicarb, methomyl, oxamyl, thiodicarb, acetamiprid, clothianidin, imidacloprid, thiamethoxam, thiacloprid, indoxacarb, spinosad, abamectin, avermectin, emamectin, endosulfan, ethiprole, fipronil, flufenoxuron, triflumuron, diofenolan, pyriproxyfen,

pymetrozine, amitraz, *Bacillus thuringiensis aizawai*, *Bacillus thuringiensis kurstaki*, *Bacillus thuringiensis* delta endotoxin and entomophagous fungi.

8. A method for controlling an invertebrate pest comprising contacting the invertebrate pest or its environment with a biologically effective amount of a compound of Claim 1.

9. A method for controlling an invertebrate pest comprising contacting the invertebrate pest or its environment with a biologically effective amount of a composition of Claim 4.

10. The method of Claim 8 or Claim 9 wherein the invertebrate pest is a cockroach, an ant or a termite which is contacted by the compound by consuming a bait composition comprising the compound.

11. The method of Claim 8 or Claim 9 wherein the invertebrate pest is a mosquito, a black fly, a stable, fly, a deer fly, a horse fly, a wasp, a yellow jacket, a hornet, a tick, a spider, an ant, or a gnat which is contacted by a spray composition comprising the compound dispensed from a spray container.

12. The method of Claim 9 wherein a plant is contacted with the composition applied as a soil drench of a liquid formulation.

13. The composition of Claim 4 in the form of a soil drench liquid formulation.

14. A spray composition, comprising:

- (a) a compound of Claim 1; and
- (b) a propellant.

15. A bait composition, comprising:

- (a) a compound of Claim 1;
- (b) one or more food materials;
- (c) optionally an attractant; and
- (d) optionally a humectant.

16. A device for controlling an invertebrate pest, comprising:

- (a) the bait composition of Claim 15; and
- (b) a housing adapted to receive the bait composition, wherein the housing has at least one opening sized to permit the invertebrate pest to pass through the opening so the invertebrate pest can gain access to the bait composition from a location outside the housing, and wherein the housing is further adapted to be placed in or near a locus of potential or known activity for the invertebrate pest.